

-6-
CLAIMS

1. A structural wooden joist comprising:
a) an elongated lower chord;
b) an elongated upper chord in a spaced apart generally parallel opposed relation to said lower chord; and
c) an openwork web structure joining said chords; said web structure comprising a series of connector members formed of inclined branches and adhesively secured to said lower and upper chords; each said branch of said connector members being formed of at least two planks having contiguous sides adhesively joined to one another; said connector members defining a series of triangular openings in said web structure.

2. A structural wooden joist as defined in claim 1, wherein each said opposite ends of said web structure displays a laminated panel, each said laminated panel being formed of a series of elongated vertical planks secured edgewise to one another and having upper and lower sides thereof adhesively joined to said upper and lower chords.

3. A structural wooden joist as defined in claim 2, wherein each said connector member at each opposite end of said web structure is adhesively joined to a chord member and to an innermost plank of said laminated panel.

4. A structural wooden joist as defined in claim 1, wherein said connector members of said web structure have upper and lower edges secured to said chords by finger joints.

5. A structural wooden joist as defined in claim 2, wherein said planks of said connector members and of said laminated panels are glued edgewise to one another. *Although... Inherent that glue would further strengthen the web member*

6. A wooden structural joist as defined in claim 1, wherein said web structure further includes a central region free of connector members.

Hershey
5,867,963
102

103
Schmitt
3,651,612
102

102

102

103
Kos et al.
5,592,800

(41)
by 12, 14, 37, 38
- Fig. 1
to allow ductwork to pass through
(Col. 3, lines 38-41)

103
① Hershey
② Koo
③ Schmitt
①
7. A structural wooden joist as defined in claim 6, further comprising a laminated panel structure in said central region; said panel structure defining an uninterrupted surface having opposite lower and upper sides adhesively joined to said lower and upper chords respectively; said panel structure of said central region being formed of a series of vertical planks secured edgewise to one another. *series of vertical planks as taught by Schmitt* (3) (31, 33) 2 to increase strength in center portion of web member

103
① Hershey
② Koo
③ Schmitt
①
8. A structural wooden joist as defined in claim 7, wherein said planks are glued edgewise to one another. *glued planks*

103
① Hershey
② Koo
③ Schmitt
①
9. A structural wooden joist as defined in claim 1, wherein said planks are made of kiln dry wood. *design choice*

102
10. A structural wooden joist as defined in claim 9, wherein said wood is selected from the group including fir, spruce and pine. *Keel. 4, lines 13-15)*

103
11. A structural wooden joist as defined in claim 1, wherein fibres in said planks extend in the longitudinal direction of said planks. *obvious*

103
12. A structural wooden joist as defined in claim 1, wherein each branch of said connector member extends obliquely at about 35° relative to said chords for a joist having a height of about 9.25 inches. *design choice* *no criticality to angles and height*

11
13. A structural wooden joist as defined in claim 1, wherein each branch of said connector member extends obliquely at about 42° relative to said chords for a joist having a height of about 11.25 inches.

Add a2f